

Descriptions of Dipterous Insects of the United States. By Thomas Say. Read Dec. 24, 1822.

The dipterous insects, from which the following descriptions are drawn out, were chiefly collected by myself, during the late expedition to the Rocky mountains under the command of Major Long, and patronage of Mr. Calhoun, the present Secretary of War.

Of these insects, many appear to be common inhabitants of the United States, throughout the immense region included by the Rocky mountains and the Atlantic ocean, between the parallels of latitude 35° and 41° north; others are probably restricted to the western states, and some were seen only in the vicinity of the Missouri river; along the base of the great northern Andes, where numbers of new and highly interesting animals and plants were for the first time detected by the party, interesting animals of the order under consideration were also collected. The specimens are in my cabinet.

CULEX, *Lin.*

1. *C. punctipennis*. Body dark rufous, covered with cinereo-ferruginous hair; feet elongated; wings maculated.

Inhabits the United States.

Orbits, bright cinereous; *eyes* deep black; *antennæ* and *proboscis* deep fuscous or blackish immacu-

late; *thorax* dark rufous, with obsolete blackish lines, and covered with cinereo-ferruginous hair; *wings* hairy, dusky, with a hardly perceptible pale band beyond the middle, and obsolete dusky spots; *scutel* glabrous, dark rufous, with a longitudinal bluish vitta; *halteres* yellow at base; *feet* elongated, deep fuscous or blackish; *pectus* each side above the posterior feet plumbeous.

It is probable this is the species which Fabr. considers as the same with the *pulicaris* of Europe; it is common on the Mississippi, and troublesome to travellers. When the insect is at rest, the wings being incumbent one on the other, the pale band is very distinct; when recent, the eyes are greenish-blue. I observed this species in considerable numbers on the Eastern shore of Maryland. The dusky spots on the wings of this species, are occasioned by the thicker growth of hair in those parts.

2. C. 5-*fasciatus*. Body clothed with cinereous hair; abdomen annulate with blackish.

Inhabits the western states.

Eyes deep black; *antennæ* fuscous, region of the base paler; *proboscis* black; *thorax* with a dilated dorsal fuscous vitta; *pectus* each side varied with blackish; *halteres* entirely whitish; *scutel* glabrous; *wings* with dusky nervures, immaculate; *feet* moderate, fuscous; *thighs* whitish; *abdomen* cinereous; *tergum* with five black, broad, fasciæ; *tail* black above.

Length about one-fifth of an inch ; proboscis one-tenth of an inch.

This is an exceedingly numerous and troublesome species. We found them in great numbers on the Mississippi in May and June. The hairy covering is very deciduous, and when an individual is caught by hand, the back of the thorax, in consequence of being denuded by the touch, exhibits the dorsal vittæ of a blackish colour confluent at the base, with an oval black spot on each side. The abdominal annuli are sometimes fuscous or even light brown.

Legs much shorter than those of the preceding species, but like them in not being annulated.

3. *C. damnosus*. Rostrum and tarsi annulate with white.

Inhabits Pennsylvania.

Head above with rather long yellow-ferruginous hair ; *antennæ* pale-brownish ; *rostrum* blackish, with a broad white band on the middle ; *thorax* black, with three cinereous lines, and clothed with yellow-ferruginous short hair ; *scutel* dull testaceous ; *pleura* grayish ; *feet* pale, covered with blackish hair ; joints of the tarsi, excepting the first, whitish at their bases ; *tergum* brown, basal margins of the segments cinereous-whitish.

Length a quarter of an inch.

This is one of the most common and troublesome of our mosquettos. It seems to correspond in some degree with the *cingulatus* Fabr., although we must infer from his description, that the posterior tarsi

only are annulated. Wiedemann considers the *cingulatus* as the male of his *molestus*, of which all the tarsi are annulated, like those of our species. I feel however perfect confidence in the description of Wiedemann, and therefore must consider our species distinct, inasmuch as the thorax is not "lateribusque niveis;" and from the laudable accuracy of that author, I cannot suppose that he would have overlooked the annulation of the proboscis, which certainly exists in this species.

4. *C. triseriatus*. Anterior margin of the wings fuscous; tergum with white spots on each side.

Inhabits Pennsylvania.

Body brown; *stethidium* livid-brown; *thorax* with white hair each side; *pleura* with two spots of white hair; *feet* pale, covered with dusky hair; *thighs* naked, blackish above near the tip; *tergum* with a triangular white spot at the base of each segment on each side; each of these spots extends upon the venter in the form of a band, interrupted each side of the middle; thus forming three spots on each series upon that part, the middle ones of which are almost connected into a longitudinal line.

Length one-fifth of an inch. ♀

The white spots contrast strongly with the brown colour of the abdomen.

CHIRONOMUS, *Meig., Wied.*

1. *C. lobiferus*. Segments of the abdomen with a lobe at their bases.

Inhabits the United States.

Antennæ yellowish-brown; *thorax* pale-cinereous, the three lines testaceous; *scutel* and *meta-thorax* testaceous; *wings* white, with a pale-brownish obsolete point near the middle; *pectus* testaceous; *feet* pale-yellowish; *tergum* somewhat glaucous, the segments with their bases and obsolete longitudinal line black; on the middle of the base of the second, third, fourth and fifth segments is a small longitudinally oval, slightly elevated lobe, extending nearly one-third the length of the segment.

Length three-tenths of an inch.

2. *C. festivus*. Body pale, when recent light green; *pectus*, three thoracic lines and *scutel* testaceous; *wings* white.

Inhabits the United States.

Body pale yellowish-brown, when recent pale-green; *head* at base of the *antennæ* testaceous; *antennæ* light brown; *eyes* deep black; *thorax* trilineate with testaceous; *scutel* testaceous; *wings* white, immaculate; *pectus* testaceous between the two anterior pairs of feet; *feet* pale, hairy; *thighs* green; *tarsi* dusky at the incisures; *anterior*s nearly naked with hairy *tarsi*; *abdomen*, second, third, fourth and fifth segments tipped with blackish above.

Length of female, seven-twentieths of an inch.

Observed particularly in the state of Illinois.

3. *C. modestus*. *Stethidium* yellowish, *abdomen* pea-green.

Inhabits Pennsylvania.

Eyes black; *antennæ*, shaft brown, whitish at base; *humerus*, *scutel*, and intervals between the dilated lines of the thorax pale; *wings* immaculate, costal edge near the tip somewhat dusky; *feet* greenish-white, anterior tibia and the tarsi dusky.

Length one fifth of an inch. ♂

4. *C. geminatus*. Thorax fuscous; pleura gray; abdomen white, annulate with black.

Inhabits Pennsylvania.

Humerus gray, the colour being a continuation of that of the pleura; *pectus* livid; *feet* white; *thighs* blackish, pale at base; *tibia* at base and tip, and *tarsi* at tip fuscous; *abdomen* with three broad double bands, formed thus, second segment fuscous with the exception of the posterior margin, third segment fuscous on the basal margin, fourth segment fuscous excepting the posterior edge, fifth segment fuscous on the basal half, sixth and seventh segments entirely fuscous.

Length three-twentieths of an inch.

5. *C. lineatus*. Wings white; stethidium yellowish testaceous, a fuscous longitudinal line on the anterior dilated line.

Inhabits Pennsylvania.

Thorax pale-greenish, the dilated lines yellowish testaceous, a longitudinal narrow line very distinct and fuscous on the anterior dilated line, and green rather obsolete behind; *scutel* pale; *wings* immaculate; *feet* whitish, incisures of the knees of the intermediate and posterior feet brown; *tergum* greenish, posterior margins of the incisures dusky.

Length ♀ nearly three-tenths of an inch.

6. *C. stigmaterus*. Tergum pale, towards the tip glaucous.

Inhabits the United States.

Antennæ pale yellowish-brown; *thorax* pale cinereous, the lines very pale testaceous, sometimes tinged with dusky; *scutel* yellowish; *metathorax* reddish-brown; *wings* white with a fuscous sub-central stigma; *pectus* testaceous; *feet* pale-yellowish; *tergum*, basal segments pale reddish-brown with whitish tips, terminal segments somewhat glaucous.

Length three-tenths of an inch. ♂

TANYPUS, Meig.

1. *T. annulatus*. Tergum annulate with dusky; wings clouded with dusky and with three or four blackish points.

Inhabits Pennsylvania.

Head and *stethidium* red-brown; *thorax*, the anterior dilated line with a brown line along its middle; *feet* white, *thighs* having an annulus near the tip, and *tibia* with one at base and two near the tip fuscous; *wings* with large obsolete dusky spots or clouds, and three or four black-brown points, of which two are towards the middle of the wing, and the remainder on the costal margin near the tip; *tergum*, segments with a dusky annulus at their bases.

Length about three-twentieths of an inch. ♂

2. *T. tibialis*. Thorax reddish-brown; tibia white

at base; abdomen white, a double band on the middle and the tip black.

Inhabits Pennsylvania.

Wings immaculate; *poisers* white; *feet* fuscous, basal half of the tibia white; *tergum*, second joint with a spot each side, two middle segments with each a band of which the anterior one is much broader, and terminal segments, deep fuscous; *pleura* yellowish.

Length ♂ more than one-twentieth of an inch.

CORETHRA, Meig.

C. punctipennis. Whitish; wings and feet punctured with fuscous.

Inhabits Pennsylvania.

Hair of the *antennæ* yellowish-white, the centres of the whorls being fuscous, the shaft of the *antennæ* has a decidedly annulated appearance; *eyes* black; *thorax* with three pale yellowish-brown abbreviated broad lines, the middle one originating before and terminating at the centre of the disk, the lateral ones originating rather before the middle; *feet* with numerous small brown punctures; *wings* with many very obvious brown spots.

Size of *C. culiciformis*, Degeer, Meig.

MYCETOPHILA, Meig.

M. ichneumonea. Pale yellowish-brown; wings with a fuscous spot; *tergum* dusky above.

Inhabits Pennsylvania.

Head tinged with rufous; *eyes* black; *thorax* a little hairy, immaculate; *feet* whitish; *tarsi* dusky; *wings* pellucid, *nervures* pale brown, a fuscous spot on the connecting nervures; *abdomen* fusiform, somewhat compressed, second, third and fourth segments, particularly the former, reddish-brown above.

Length three-twentieths of an inch.

This belongs to Meigen's first division of the genus.

CAMPYLOMYZA, Meig. Wied.

C. scutellata. Black, *scutel* testaceous; *feet* yellowish; *wings* hyaline, *nervures* at the base, pale-yellowish; *poisers* yellowish.

Inhabits Missouri.

Length nearly one-twentieth of an inch.

ERIOPTERA, Meig.

E. caliptera. Wings fuscous, spotted with white; intermediate and posterior thighs biannulate with black.

Inhabits Missouri.

Body pale-yellowish; *thorax* with two fuscous lines above, and one on each side before the wings; *wings* dark brown, about thirteen spots arranged along the margins, and numerous somewhat smaller ones on the disk, white; *nervures* hairy; *anterior*

thighs with a blackish line near the tip; *intermediate* and *posterior thighs* with an annulus on the middle and another near the tip, blackish; *abdomen* tinged with brownish, a darker dorsal line and lateral longitudinal incisures.

Length more than three-twentieths of an inch.

CTENOPHORA, Meig.

1. *C. fuliginosa*. Dusky, wings spotted with white; abdomen lineate with yellow.

Inhabits Missouri.

Body dark brown; *thorax* lineate with yellowish before; *wings* fuliginous, with about three white spots on the anterior margin, and a transverse oblique one on the disk attaining the thinner margin; *feet* short, pale testaceous, tips of the thighs and of the tibia and tarsi blackish; *tergum* fuscous, with two dilated yellow lines; *venter* yellow, obsolete central vitta and posterior margins of the segments, blackish.

Length about seven-tenths of an inch.

2. *C. abdominalis*. Abdomen bright fulvous, margined with black; wings spotted with fuscous.

Inhabits Pennsylvania.

Head dull yellowish; *rostrum*, *palpi*, and *antennæ*, dark fuscous; *front* with a transverse black line at the base of the antennæ, and another each side from the antennæ to the rostrum; *occiput* dusky; *thorax* cinereous, a double black longitudinal line abbreviated behind, and three black spots on each

side, whereof two are oblong, and the intermediate one subquadrate; *collar* pale, with three black spots; *scutel* dirty yellowish, an oblique black spot on each side of it; *pleura* gray, with a longitudinal vitta from the head to the abdomen; *wings* with four fuscous spots on the costal margin, and a minute one beyond the carpus; *nervures* fuscous, slightly margined, the middle falcate one submargined with white, costal margin between the spots white, posterior margin from the ultimate nervure to the apex with alternate fuscous and white spots; *tergum* bright fulvous, basal and apical segments, and a wide lateral vitta black; *venter* paler fulvous, posterior segments, shaded with dusky and with a longitudinal black line; *feet* black, a white annulus at base of the tibia; *thighs* pale with a black annulus at tip.

Length one and a half inches.

This is one of our largest and finest species of Linnæan Tipula.

LIMNOBIA, Meig.

1. *L. fasciapennis*. Wings white, with four fuscous, marbled bands; feet pale, blackish at the tips of the thighs.

Inhabits the United States.

Body above, rufo-cinereous; *eyes* deep black; *antennæ* fuscous, first and second joints black, third and fourth, yellowish; *palpi* black; *wings* white,

with about four, much dilated, marbled, dark brown bands, of which one is terminal, and one elongated to the base, a small costal spot between the second and third bands; *halteres* dusky, *capitulum* white; *feet* pale rufous, *thighs* tipped with fuscous; *abdomen*, segments with an obsolete, brown, cruciate mark on each, of which the transverse line is black.

Length of female, three-fifths of an inch, male rather shorter.

This species occurs not unfrequently on the banks of the Mississippi. The nervures of the wings correspond with those of the wing represented on tab. 6, fig. 4, of Meigen's descriptions of European Diptera.

2. *L. macrocera*. Blackish-piceous, polished; wings three-spotted; antennæ longer than the body.

Inhabits East Florida.

Rostrum, first and second joints of the antennæ, and the inferior portion of the front, yellowish; *vertex* piceous; antennæ hairy on all their length, third and fourth joints with a small vertical spine at tip; *halteres* and *feet* yellowish-white; *thighs* and *tibia* at tip dusky; *wings* with three large fuscous spots, of which one is near the base, the second on the middle of the costal margin not attaining to the edge, and the third forms nearly a band across on the connecting nervures; *abdomen* less intensely coloured than the thorax, the three or four middle segments, pale-yellowish at base.

Length three-tenths of an inch.

The disposition of the wing nervures differs from

any of those represented by Meigen, but they are more like those of fig. 7. pl. 5, than any of the others.

3. *L. tenuipes*. Thorax livid; humerus yellowish; wings dusky.

Inhabits Pennsylvania.

Antennæ long, blackish; *vertex* fuscous; *thorax* livid; *humerus* reddish-yellow; *nervures* arranged as in Meigen's fig. 2, pl. 6; *pleuræ* and *pectus* reddish-yellow; *feet* long and slender, blackish, pale at base; *tergum* brownish-livid, segments on their posterior margins somewhat darker; *abdomen* whitish.

Length two-fifths of an inch.

This species may be found in plenty during the autumn at Harrowgate, in humid situations, in company with *T. flavicans* Fabr.

4. *L. cinctipes*. Yellowish; wings varied with dusky; thighs bifasciate beyond the middle.

Inhabits Missouri.

Body pale-yellowish; *thorax* trilineate with black, intermediate line double, terminating at the central incisure; lateral lines interrupted before, and continued posteriorly to their union at the base of the tergum; *wings* varied with blackish; four distant spots on the costal margin, of which the terminal one is semi-circular and the penultimate one is continued in a very irregular band towards the thinner margin; thinner margin with about four much diluted spots, the terminal one being continued as a band across the tip; *abdomen* yellow, somewhat varied with

black; *thighs* with two black annulations beyond the middle.

Length about half an inch.

The nervures of the wings agree with those of Meigen's fig. 5 of tab. 6, excepting that there are three nervures on the costal margin as in his figures 5, 7 and 8 of tab. 5.

5. *L. humeralis*. Dusky, beneath pale; wings hyaline immaculate.

Inhabits Pennsylvania.

Antennæ fuscous, first joint and *rostrum* dull-yellowish; *front* and *vertex* dull cinereous; *thorax* dark livid; *humerus*, two obsolete lines, and lateral margin as far as the wings, yellowish; *pleura* and *pectus*, pale yellow; *scutel* and *metathorax* colour of the thorax; *nervures* dark brown, corresponding in arrangement with Meigen's fig. 2, pl. 6; *feet* dark brown; *tergum* dull-yellowish, with a black line; *venter* white.

Length two-fifths of an inch. ♀

6. *L. rostrata*. Feet elongated; wings spotted; *rostrum* nearly three times as long as the head.

Inhabits Pennsylvania and Maryland.

Antennæ, *rostrum* and *vertex* fuscous; *thorax* cinereous, trilineate with fuscous, the intermediate line abbreviated behind, and the lateral ones abbreviated before; *wings* with five fuscous sub-equal spots on the costal margin, the penultimate one rather largest, and a spot at each termination of a nervure at the inner

margin and apex, the connecting nervures also are margined with fuscous; *feet* pale.

Length one quarter of an inch. ♀

On flowers: this species resembles *L. longirostris* Wied. in the form of the rostrum and the arrangement of the nervures, and with that insect it seems entitled to be separated from *Limnobia* as a distinct genus.

TIPULA, *Lin. Meig.*

1. *T. cunctans*. Wings with a fuscous costal margin; tergum with a dusky line.

Inhabits Pennsylvania.

Rostrum, *mouth* and *base of the antennæ* pale reddish-yellow, *flagellum* dusky; *front* and *vertex* cinereous; *collar* pale, with a dusky line; *thorax* brown, two pale distant lines on the disk, confluent behind, and another on each side passing over the wings; *wings* dusky; *nervures* fuscous; the fuscous costal margin is interrupted near the stigma, by an obsolete, pale spot; *poisers* dusky, *stipes* yellowish; *feet* blackish; *thighs* and *tibia*, paler at base; *pleura* gray; *abdomen*, pale brownish-yellow, with a distinct dusky line on the tergum, the segments of which are also margined behind with dusky.

Length four-fifths of an inch.

Arrangement of the nervures like that of the preceding species.

2. *T. costalis*. Wings with a fuscous costal mar-

gin; antennæ annulate; segments of the tergum, with an interrupted transverse line.

Inhabits Pennsylvania and Maryland.

Head cinereous; *rostrum* and *antennæ* yellowish, segments of the latter, excepting the three basal ones, fuscous at base; *thorax* yellowish-brown, with a darker line; *scutel* and *metathorax* pale; *pleura* whitish; *feet* dull yellowish-brown; *wings* with a brown costal margin extending to the extremity of the carpus; *tergum* light yellow-brown, segments with a fuscous posterior margin, and two linear spots placed in a line transversely.

Length three-fifths of an inch.

The arrangement of the nervures of the wings is nearly similar to that of Meigen's fig. 9 of pl. 6.

3. *T. macrocera*. Pale-yellowish; antennæ elongated.

Inhabits Pennsylvania.

Inferior longitudinal half of the *rostrum*, reddish-brown; *palpi* dusky; *antennæ* twice the length of the head and thorax, second joint very small, third joint as long as the fourth and fifth taken together, the remaining joints a little dusky, dilated at their bases, and somewhat excavated in their middles; *wings* immaculate; *nervures*, *stigma* and interstice of the first and second nervures, dull-yellowish; *feet* pale-brownish; *abdomen* somewhat darker than the thorax, with three series of black dots, one lateral, and one ventral; *pleura* and *pectus*, whitish-yellow.

Length half an inch.

The antennæ by their length, the second and third joints, and the form of those of the flagellum show an alliance with the genus *Nephrotoma*, but as they have but thirteen joints, the insect must be regarded as a *Tipula*.

4. *T. collaris*. Thorax blued-black, lineate with yellow; tergum yellow with blackish bands.

Inhabits Pennsylvania.

Head fulvous; *antennæ*, first and second joints, rather paler than the head; *palpi* fuscous, pale at base; *occiput* black; *thorax* blued-black, the collar, two lines each side confluent before and behind, *scutel* and *metathorax*, bright yellow, the latter with two confluent blued-black spots at tip; *poisers* brown, tip of the capitulum yellowish; *wings* with a brown stigma, *nervures* brown, differing in arrangement from those of the preceding species, and from those figured by Meigen; *feet* brown, basal portion of the thighs pale; *tergum* yellow, segments black-brown on their posterior half; *venter* pale-yellow, segments dusky on their posterior half, with a silvery reflection.

Length a little less than half an inch.

5. *T. annulata*. A dark brown stigma; abdomen pale, annulate with black.

Inhabits Pennsylvania.

Antennæ fuscous, first and second joints whitish; *rostrum*, and lower portion of the front whitish; *vertex* and *occiput* dusky; *palpi* fuscous; *thorax* yellow.

lowish-brown, the indented lines paler; *metathorax* light livid; *wings* with a brown stigmata, *nervures* brown, arranged like those of Meigen's fig 9, pl. 6; *feet* dusky-brownish; *abdomen* yellowish-white, incisures and their margins black, forming annulations complete.

Length two-fifths of an inch.

6. *T. trivittata*. Wings four-banded with fuscous; tergum yellow with a dorsal and lateral fuscous vitta.

Inhabits Pennsylvania.

Head dusky; *front*, *rostrum*, and base of the *antennæ* pale; *thorax* whitish-cinereous, lineate with light brown, the lines double; *collar* with a brown line, and lateral dusky spot; *scutel* and *metathorax* with a brown line; *pleura* and *pectus* gray; *poisers* whitish, *capitulum* brown; *wings* with fuscous margined nervures, fuscous bands and white areolæ, between the first and second band is a semi-band on the thinner margin, second band enclosing a white spot on the costal margin; *feet* dusky; *tergum* with a longitudinal fuscous line, segments with lateral fuscous triangles and a dorsal transverse abbreviated dorsal line near the middle of each.

Length one inch.

Nervures resembling those of the preceding species.

SCIOPHILA, Hoff.

S. fasciata. Pale-yellowish; thorax trilineate; tergum fasciate with fuscous.

Inhabits Pennsylvania and Maryland.

Antennæ at tip, and *vertex* fuscous; *thorax* with a double light-brown middle line attenuated and abbreviated behind, a dark chesnut dilated line on each side abbreviated before, and a small obsolete one above the origin of the wings; *pleura* with a dusky spot over the insertion of each foot, placed triangularly, the inferior one itself triangular; *tibia* and *tarsi* a little dusky; *segments of the tergum* fuscous on their posterior margins.

Length rather more than one-fifth of an inch.

RYPHUS, Latr. Meig.

1. *R. marginatus*. Wings spotted; thorax trilineate with rufous.

Inhabits Pennsylvania.

Head dull reddish-brown; *vertex* blackish; *thorax* cinereous, with three rufous lines, of which the middle one is abbreviated behind, and the lateral ones are abbreviated before; *wings* with three brownish spots on the costal margin; *feet* whitish, joints a little dusky; *tergum* blackish at tip, pale at base.

Length less than one-fifth of an inch.

The number, form and position of the wing spots, are similar to those of *Sciara punctatus*, Fabr. it differs however, from that insect, in addition to other peculiarities, by the colour of the thoracic lineations.

2. *R. alternatus*. Costal margin of the wing be-

yond the middle with three fuscous spots alternating with white ones.

Inhabits Pennsylvania.

Body blackish-fuscous; *thorax* with three black lines, of which the intermediate one is double; *feet* short; *wings* hyaline, connecting nervures slightly margined with fuscous spots on the costal margin, placed one on the middle of the length, then a white one which is very conspicuous on the edge of the wing, then a brown one, then another white one divided into two compartments by a nervure, then a third brown one terminated at the tip of the wing by a third white spot.

♀ Length to the tip of the wings a quarter of an inch.

The habit differs from that of the other species I have seen.

SIMULIUM, Latr.

S. venustum. Black; *thorax*, two perlaceous spots before, and a larger one behind; *poisers* black, *capitulum* bright yellow, dilated.

Inhabits Shippingsport.

Body black; *wings* whitish, with yellow, and iridescent reflexions.

MALE, *eyes* very large, separated only by a simple line, dull reddish-yellow, inferior half black; *thorax* velvet-black, a bright, oblique, perlaceous, dilated line each side before, and a large perlaceous

spot or band behind; *sides* beneath varied with perlaceous; *feet, tibia* above, and first joint of the four posterior tarsi, white; *abdomen* with an oblique lateral perlaceous line at base, and two approximate, lateral, perlaceous ones near the tip.

FEMALE, *eyes* moderate; *thorax* plumbeous-black, immaculate; *scutel* black; *abdomen* whitish beneath.

This very pretty species, perched in considerable numbers on our boat at Shippingsport, Falls of the Ohio. It ran with considerable rapidity, constantly advancing its long anterior feet. Its bite is pungent.

BERIS, *Latr. Meig.*

B. fuscitarsis. Thorax piceous-black; polished; tergum reddish-brown, inclining to yellowish on the disk, and with brown incisures.

Inhabits Pennsylvania.

Wing hyaline with a pale-brown stigma and nervures, origin yellowish-white; *thorax* with the posterior angles piceous; *feet* anterior and intermediate pairs yellowish-white; *tarsi* excepting the base of the first joint fuscous, posterior pair reddish-brown, first joint of the tarsi yellowish-white.

Length one-fifth of an inch.

The scutel of my specimen is wanting, I cannot therefore ascertain its number of spines.

NEMOLETUS, *Geoff. Latr. Meig.*

N. pallipes. Greenish-black, thorax tinged with green; nervures whitish.

Inhabits Pennsylvania.

Rostelliform process blued-black, polished; *antennæ* brown, situate at the base of the rostelliform process; *front* with a triangular white spot above the antennæ; *thorax* punctured, a testaceous line before the wings, and another each side on the basal edge; *poisers* and *scale* pure yellow-white; *costal nervures* whitish; *feet* yellowish, base of the thighs and middle of the posterior tibia black; *abdomen* blued-black, or greenish-black, posterior edges of the segments of the venter rufous.

Length three-twentieths of an inch. ♂

XYLOPHAGUS, Meig.

X. triangularis. Black, sub-glabrous; thorax plumbeous with a black line; feet testaceous.

Inhabits Missouri.

Body black; *head* pale plumbeous; *antennæ* and *palpi* black; *proboscis* pale-rufous; *trunk* black-polished; *thorax*, disk pale-plumbeous, with a longitudinal polished black line, gradually and slightly dilating behind; *nervures* fuscous; *halteres* white; *feet* testaceous, tips of the tarsi and of the posterior thighs and tibia dusky; *tergum* polished, with a large opaque triangle at the base of each segment excepting the first.

Length two-fifths of an inch.

The nervures of the wings are arranged in a similar manner with those of *X. ater*, Fab. Meig.

PANGONIA, Latr.

P. incisuralis. Thorax dusky glaucous with dirty yellowish hair; abdomen dark chesnut with whitish incisures.

Inhabits Arkansa.

Front ocraceous; *ocelli* distinct; *hypostoma* dusky; *palpi* and *setæ of the proboscis* testaceous; *proboscis* black; *antennæ* pale-yellowish; *occiput* with very short greenish-yellow hair; *thorax* with two distant obsolete lines; *wings* reddish-brown; *feet* yellowish, *thighs* dark chesnut at base; *tergum* and *venter* ♀ dark chesnut polished, the posterior margins of the segments whitish and slightly hairy; ♂ pale testaceous with short hair.

Length thirteen-twentieths of an inch.

The only species yet known to inhabit North America. It was brought from the Arkansa by Mr. Thomas Nuttall.

TABANUS, L. Latr.

1. *T. molestus*. Thorax cinereous, lineate with fuscous; scutel cinereous; abdomen black-brown, a dilated dorsal vitta.

Inhabits Missouri.

A frontal, blackish-brown, glabrous, oblong callos, with a dilated obscurely rufous glabrous line above, terminating in a smaller dilatation; *antennæ* black; *proboscis* black; *palpi* testaceous; *thorax*

cinereous, with four reddish-brown lines; *wings* dusky, *nervures* dark-brown, blackish towards the tip, a black carpal line, and slight anastomosis; *scutel* cinereous; *pectus* pubescent, cinereous; *feet* black, *tibia* obscure ferruginous; *tergum* black, a dilated, cinereous, dorsal vitta, consisting of dilated triangular spots on the third, fourth, fifth and sixth segments, the larger ones before; *incisures* cinereous.

Length less than four-fifths of an inch.

This is one of the species which are called *prairie flies*; it is numerous in the prairies of the state of Missouri, and is very troublesome to the cattle. I have seen cattle in the forests which margin the prairies, when attacked by these insects, start suddenly and plunge into the thickets that the branches may divest them of their enemies. Travellers are much incommoded by them; many cover their horses with canvas, &c. to shield them from their attacks, or rest in some shaded and secluded situation, during that part of the day when they are most abundant.

2. *T. annulatus*. Thorax cinereous-plumbeous; wings immaculate; tergum blackish; incisures cinereous; tibia white.

Inhabits Missouri.

Body somewhat pubescent; *head* beneath cinereous downy; *antennæ* rufous; *palpi* white; *proboscis* black at tip; *thorax* cinereo-plumbeous, testaceous in the middle, and clothed with short prostrate hairs; *pectus* colour of the thorax, downy; *feet* dusky; *tibia* white with the exception of the

tips; *wings* slightly dusky, immaculate, *nervures* brownish, immarginate; *abdomen* blackish-brown, incisures cinereous.

Length of the body more than two-fifths of an inch.

Smaller than *T. lincola*.

3. *T. stygius*. Violet-black; thorax pale chesnut.

Inhabits Arkansa.

Hypostoma and *front* dirty yellowish; *antennæ* and *palpi* black, callous of the front quadrate, chesnut, with a simple slightly dilated line above; *thorax* with five cinereous lines; *scutel* pale chesnut; *wings* ferruginous, with three fuscous spots; *abdomen* immaculate; *tibia* dull chesnut at base.

Length nearly nine-tenths of an inch.

CHRYSOPS, Meig. Latr.

C. quadrivittatus. Cinereous; tergum with four series of brown lines.

Inhabits near the Rocky Mountains.

Length to the tip of the abdomen nearly two-fifths of an inch.

Body cinereous; *head* with three black frontal spots placed in a transverse series, the intermediate one smallest, and a larger black spot above the *antennæ*; *antennæ* dark reddish-brown, terminal joint black at tip; *thorax* blackish, with five narrow cinereous lines; *wings* with a large costal spot, anastomosis and obsolete spots fuscous; *feet* yellowish.

brown, tips of the tibia and of the tarsal joints black; *tergum* with four series of fuscous abbreviated lines, the two dorsal series approximate, the lateral ones distant, between the dorsal series tinged with yellowish-brown.

LEPTIS, *Fab. Meig.*

1. *L. ornata*. Velvet black; thorax and abdominal bands with whitish hair; wings hyaline; feet white.

Inhabits Pennsylvania.

Hypostoma and *front* with silvery white hair; *thorax* more especially on its lateral margins with silvery hair very slightly tinted with yellow; *pleura*, *pectus* and *coxae* black; *feet* pale yellowish, *tarsi*, except at base, fuscous; *poisers* pale yellow; *tergum*, basal segment nearly all covered with silvery hair, remaining segments with each a silvery band behind, occupying nearly one half of its length, and interrupted in the middle; *venter* immaculate.

Length ♂ nine-twentieths of an inch.

This species resembles *L. thoracica* Fabr. but the wings are not obscure as those of that species, the thighs as well as the tibia are pale, the bands of the *tergum* are much broader, the thoracic hair differently coloured, and the *hypostoma* and *front* are covered with silvery hair.

2. *L. punctipennis*. Blackish; wings spotted; abdomen pale at base.

Inhabits Pennsylvania.

Hypostoma dark cinereous, with a fringe of long hair each side; *antennæ*, *palpi* and *rostrum* black; *vertex* blackish-fuscous; *stethidium* black; *thorax* varied with cinereous lines; *pleura*, *pectus* and *coaxæ* dark cinereous; *feet* pale brownish, *thighs* more dusky; *poisers* yellowish-white; *wings* hyaline, tip margin, connecting nervures, margin of the nervures near the thinner edge of the wing, costal margin ending in a carpal spot, fuscous; *tergum*, four basal segments pale-yellowish, with a dusky basal margin and triangular spot, remaining segments black.

Length ♂ more than one-fifth of an inch.

3. *L. quadrata*. Pale yellowish; thorax lineated; abdomen fasciated; wings with a large spot.

Inhabits the United States.

Body pale-yellowish; *head* very slightly tinged with plumbeous, excepting the *antennæ* and mouth; *thorax* with three dilated longitudinal brown lines, of which the lateral ones are interrupted; *scutel* immaculate; *wings* whitish, with a brown subquadrate spot, extending from the margin to the centre of the wing, and from near the anterior inner angle of the spot an oblique brown line extends to the thinner margin, *nervures* brown, white at base; *pectus* and *feet* immaculate; *tergum* with a black band at the base of each segment; *halteres* with a dusky capitulum.

Length to the tip of the wings more than seven-twentieths of an inch.

This insect is most closely allied to the *Atherix oculata*, Fab. It occurs in Pennsylvania as well as in the state of Missouri.

4. *L. basilaris*. Blackish-fuscos; wings hyaline, base or neck only fuscous.

Inhabits Pennsylvania.

Hypostoma in a particular light cinereous; *antennæ* dark testaceous; *thorax* and *scutel* with scattering golden-yellow hairs; *pectus* and *pleura* brown; *feet* white, *thighs* at base and tips of the *tarsi* brown; *tergum* on the posterior margins of the basal segments with yellow hair; *venter* immaculate, paler at base; ♀ *head* cinereous, vertex and occiput spotted with black.

Length ♀ one-fifth of an inch. ♂ rather less.

The nervures of the wings are disposed as in Meigen's second division.

5. *L. rufithorax*. Yellowish-testaceous; wings dusky; *tergum* with a series of black spots.

Inhabits Pennsylvania.

Antennæ dull testaceous, terminal joint black; *labia* fuscous; *thorax* in a particular light with two dusky obsolete lines; *poisers* fuscous; *wings* fuliginous, particularly on the costal edge, the antepenultimate nervure uniting with the preceding one before it attains to the inner edge of the wing; *tibia* and *tarsi* dusky, *hind feet* elongated, *tibia* and tip of the *thighs* above blackish, the *tarsi* paler; *tergum*

with a longitudinal fusiform black line on each segment, those on the two basal segments rounded and central, posterior segments blackish on their basal margins.

Length two-fifths of an inch.

Belongs to Meigen's first division.

6. *L. fumipennis*. Wings dusky; tergum brown, annulate with pale testaceous.

Inhabits Pennsylvania.

Hypostoma cinereous; globular prominence, *proboscis* and *antennæ* yellowish; *thorax* fuscous, posterior edge dull testaceous; *scutel* pale testaceous, fuscous at base; *wings*, inner and terminal margins hyaline; *poisers* brown; *scapus* whitish; *feet* white; *pleura* and *pectus* yellowish-testaceous; *tergum* fuscous, segments yellowish-testaceous on their posterior margins; *venter* yellowish.

Length rather more than one-fifth of an inch.

Belongs to Meigen's second tribe.

7. *L. fasciata*. Velvet-black; thorax with golden-yellow hair; tergum fasciate with white; wings hyaline with a large brown stigma.

Inhabits Pennsylvania.

The fundamental colour of the thorax does not differ from the other parts of the body; *hypostoma* in a particular light cinereous; *pleura* and *pectus*, dark lurid; *poisers* fuscous; *scapus* whitish; *nervures* of the wings brown, stigmata rather large, brown and distinct; *tergum* on the posterior margin of each segment banded with yellowish-white; *ven-*

ter immaculate; *feet* whitish, *thighs* reddish-brown towards their bases, *tarsi* dusky at tip.

Length ♂ rather more than a quarter of an inch.

The nervures of the wings are arranged as in Meigen's second division, and the insect has much the appearance of *L. thoracica*, of Fabricius.

8. *L. vertebrata*. Tergum with three lines of fuscous spots; wings immaculate; tips of the thighs black.

Inhabits Florida.

Head black; terminal joint of the antennæ, excepting the seta and the palpi, pale; *stethidium* blackish; *thorax* with two cinereous obsolete lines, and a pale humeral spot; *scutellum* and *poisers* pale-yellowish; *wings* hyaline, costal margin tinged with testaceous, *nervures* brown; *feet* pale testaceous; *coxae*, *tarsi*, half of the posterior thighs and of the posterior tibia, black; *tergum* yellowish, segments each with a fuscous spot above, and a dilated line on the lateral edge, the dorsal spots on the posterior segments are extended into bands; *venter*, terminal joints black.

Length two-fifths of an inch. ♂

This belongs to Meigen's first tribe.

9. *L. albicornis*. Tergum with three lines of fuscous spots; wings spotted and tipped with fuscous; pectus and feet whitish, tarsi dusky.

Inhabits Pennsylvania.

Body above rufo-yellowish; *hypostoma* chesnut; *antennæ* yellowish-white; *seta* black; *palpi* and *rostrum* white; *gena* glaucous, with whitish hair;

Thorax three or five lineated, the three intermediate lines being obsoletely separate; *scutellum* immaculate; *wings* hyaline, costal margin tinged with yellowish; *nervures*, particularly those of the inner margin, the transverse ones, stigmata, and tip of the wing fuscous; *tergum* with a large rounded spot on each segment, and a series of smaller marginal ones on each side.

Length $\frac{1}{2}$ nine-twentieths of an inch.

This species is closely allied to the *L. scolopacea*, Fab. but it may be distinguished by the colour of the stethidium, antennæ, feet, &c.

10. *L. plumbea*. Blackish-plumbeous; wings clouded; poisers pale-yellow.

Inhabits Pennsylvania.

Thorax brown, with five obsolete cinereous lines; *wings* with a fuscous costal margin, and four dusky arquated bands which do not attain the inner margin, the terminal one is obsolete and the basal one very short and also obsolete; *feet* reddish-brown, *tibia* pale.

Length a quarter of an inch nearly.

Nervures of the wings as in *albicornis*.

THEREVA, Meig.

1. *T. tergisa*. Wings spotted; *tergum* silvery pruinose.

Inhabits East Florida.

Body blackish; *head* blackish-brown, with white hair beneath; *antennæ*, basal joint cinereous with black hair; *palpi* pale; *proboscis* dusky; *thorax*

blackish-brown; *wings* slightly tinged with brownish, and with several brown spots, and brown stigma; *feet* pale, dusky at the joints; *tergum* dull testaceous, darker at base, and with a bright silvery reflection in a certain position, posterior margins of the segments white.

Length more than seven-twentieths of an inch.

The reflected colour of the *tergum* is very similar to that of *Musca anilis*, Lin. It seems to be closely allied to *T. pictipennis*, Wied. but is larger, destitute of bands on the wings, and the colour of the antennæ, feet, &c. is different.

2. *T. nigra*. Black; incisures of the *tergum* and lateral spot on the fifth segment gray.

Inhabits Pennsylvania.

Head glabrous, polished; *hypostoma* and all beneath, with gray minute hair; *antennæ* with minute gray hair, and longer sparse black hair on the basal joint; *occiput* velvet black; *wings* pellucid, *stigmata* and *nervures* brown, costal edge beyond the *stigmata* pale, each of the two ultimate pairs of *nervures* uniting before they attain the edge of the wing; *poisers* brown; *scapus* pale; *pleura*, *pectus* and *coxae* somewhat glaucous; *feet* blackish, *tibia* and *tarsi* excepting at tip pale, anterior *tibia* at tip and *tarsi* blackish; *tergum* polished, posterior edges of the third or fourth basal segments gray, spot each side of the fifth segment oblong-oval oblique.

Length three-tenths of an inch.

STYGIA, Meig.

S. elongata. Blackish, polished; abdomen elongated, incisures yellowish.

Inhabits Pennsylvania.

Antennæ yellowish-white, the third joint dark fuscous, not longer than the preceding joint, but terminated by an elongated style, the second joint is somewhat more robust than the first, which last is not remarkably dilated at tip, neither is it perceptibly obliquely truncated; *occiput* plumbeous; *thorax* piceous-black; *humerus* with a dull rufous spot, which is continued by a curved line to the origin of the wings; *pleura* with a silvery line; *wings* hyaline, *nervures* brown; *poisers* yellowish-white; *feet* including the *coxæ* white, *tarsi* dusky; *abdomen* elongated, depressed; *tergum* blackish-brown, darker towards the tip, first segment yellowish at base and tip, second segment yellowish on the posterior margin, the two succeeding segments with a spot on each side at tip, terminal segments immaculate; *venter* with more of the yellowish colour than the back.

Length rather more than three-tenths of an inch.

The third nervure of the costal margin is much less distant from the second, than the corresponding nervures of *S. sabæa* Meig. and the first basal-cellule is much less elongated, and the superior branch of the apical fork is much less arquated than in that insect.

ANTHRAX, Latr.

1. *A. morioides*. Black, with numerous ferruginous hairs; wings deep black with white at tip.

Inhabits the United States.

Body black, covered with short prostrate ferruginous hair on the sides of the stethidium; *eyes* chestnut-brown, widely emarginate behind; *wings* deep black, opaque, posterior margin from near the tip to the inner angle hyaline white, black portion occupying nearly two-thirds of the wing, and deeply dentate at tip, an obsolete hyaline spot near the base, about three in the middle placed transversely, and one near the tip of the opaque portion; *poisers* pale; *capitulum* black beneath, and near the tip above; *feet* pale, *tarsi* and *anterior thighs* dusky; *tergum* with silvery hairs each side at base, and each side near the tip.

Length three-tenths of an inch.

Very closely allied to *A. morio*, Fab. I observed this species in considerable numbers near Merrimac river, Missouri. The terminal joint of the antennæ is rather short, by which character it may be distinguished from *A. fulvohirta*, Wied. It is referable to the fifth tribe of the genus anthrax, agreeably to Wiedeman's divisions.

2. *A. lateralis*. Black; wings hyaline; sides with fulvous hair; tergum banded.

Inhabits Pennsylvania and Maryland.

Hypostoma and *occipital* orbits with white hair; *stethidium* with fulvous hair, particularly on the sides of the thorax, on the pleuræ and collar; *wings* as far as the basal transverse nervure fuscous, costal nervures fuscous, the included areola yellowish-brown; *feet*, the hair with a whitish reflexion; *tergum* with a band of prostrate yellowish hair at the base of each segment, and with long fulvous hair each side as far as the middle of the length.

Length nearly one-fourth of an inch.

It belongs to Wiedemann's fifth tribe.

3. *A. scripta*. Wings varied with black and hyaline; tergum with four series of silvery points.

Inhabits Pennsylvania.

Head reddish-brown, obscure covered by yellow ferruginous hair, intermixed with longer black hairs, a black band on the hypostoma, a black spot on each frontal orbit, and vertex black; *thorax* dusky, or blackish, with three black vittæ, sides before the wings dull cinereous, bounded beneath by another black line, beneath the posterior angles is a fascicle of gray hairs, above which are a few ferruginous hairs; *scutel* reddish-brown, with short black hair, and a small white spot at the subangulated tip; *pleura* and *pectus* reddish-brown; *feet* reddish-brown, *tarsi* blackish; *wings*, costal areola with a small hyaline spot, which is the termination of a band extending in a slightly arquated direction to the inner angle of the wing, and interrupted by the nervures into five compartments; the three larger

cellules of the binder margin, with the exception of the margins of the nervures, hyaline; a hyaline rounded spot occupying the exterior half of the central cellule, with a smaller spot on each side of it; sometimes obsolete or double; above this central cellule, and near the costal nervures, are two double distant small hyaline spots; tip of the wing hyaline, the two nervures margined with blackish, the margin of the superior one is generally interrupted in the middle; *tergum* reddish-brown, covered with black hair, first segment with cinereous hair each side of the scutel; second and third segments with each four small white spots on the posterior edge, the lateral ones on former linear; fourth with but two, the lateral ones being obsolete; fifth with a transverse line each side, sometimes crossed by a longitudinal line extending on the posterior segments, and exhibiting a cruciform mark, these marks and dots have a silvery brilliancy.

Length seven-tenths of an inch.

This species seems to come nearest to Meigen's second tribe, but it differs by having an additional cellule under the large central cellule of the wing. I labeled in my cabinet with the Fabrician name of *capucina*, but I cannot identify it with the somewhat detailed description which Meigen quotes from Fabricius, nor yet with Pallas's description of the *caloptera*, that both Meigen and Wiedemann quote, and regard as synonymous with the *capucina* which they believe to be a native of Europe.

That our insect is totally different from the *caloptera* no one will for a moment doubt, for the latter is no larger than the *morio*, whereas our insect is nearly equal to the *cerberus* in size.

In deference therefore to the opinion of the authorities above referred to, I describe this species as distinct, though it seems probable that Fabricius had this species in view when he referred to North America as the native country of the *capucina*.

4. *A. analis*. Black; wings hyaline at tip; tail silvery.

Inhabits Georgia.

Body deep black; *wings* brown-black opaque, posterior third hyaline; *anterior* and *intermediate tibia* piceous on the upper edge; *tergum* brilliant silvery at tip, and with a white fascicle each side at base.

Length seven-twentieths of an inch.

I am indebted to Mr. August G. Oemler, of Savannah, for this fine species. It belongs to Wiedemann's fifth division.

5. *A. alternata*. Body villous, above black, beneath and sides cinereous; *tergum* fasciate with cinereous.

Inhabits the United States.

Head black; *eyes* chesnut; *front*, beneath the antennæ bright cinereous; *proboscis* concealed in a groove to the tip; *palpi* distinct, exterior; *thorax* cinereous, tinged with fulvous each side, and at the scutellar suture; *wings* dusky, pellucid, *nervures*

blackish-brown; *base* to the first transverse nervures brown-opaque; *pectus* cinereous; *feet* blackish; *scutel* edged with cinereous; *abdomen* each side with dense long hair, which is cinereous on the first and second segments, but on the remaining segments alternating with black; *tergum* with six or seven cinereous lineolar bands; *venter* cinereous; *segments*, particularly the third, black at base.

Length of body more than eleven-twentieths of an inch.

Found in Pennsylvania, and also in Missouri. It belongs to Wiedemann's fifth tribe.

6. *A. irroratus*. Black; wings hyaline, with numerous black punctures.

Inhabits near the Rocky Mountains.

Body deep black, hairy; *eyes* reddish-brown, tinged with golden; *wings* hyaline, with numerous, irregular, unequal dark fuscous spots, of which those near the costal margin are larger than those near the posterior margin and tip, the spots along the costal margin are quadrate and alternate somewhat regularly with their hyaline intervals.

Length one-fourth of an inch.

The nervures of the wings are nearly similar to those of the wing fig. 22, pl. 17 of Meigen's *Diptera Europea*—(Europäischen zweiflügeligen.)

7. *A. caliptera*. Fundamental colour brown; wings with three-brown bands, and a silvery spot on the costal base.

Inhabits Arkansa.

Thorax black-brown, with very short yellowish hair, and longer hair on the anterior edge, a pale fundamental spot on the posterior angle; *feet* pale reddish-brown; *poisers* yellowish; *scutel* reddish-brown; *wings* brown at base, then a hyaline arquated equal band divided by nervures into five compartments, then a brown band bifid on each margin, and rather narrower in the middle, then an irregular hyaline band very narrow towards the costal margin, abruptly produced in the middle to the tip of the central cellule, then an irregular brown band including a hyaline triangular spot on the inner margin of the wing, and another at the costal margin which almost separates a portion of the band into a distinct triangular spot, lastly an irregular hyaline spot at tip, costal margin, excepting where it is crossed by the first hyaline band, brown; *tergum*, fundamental colour yellowish-brown, with very short black hair, first segment black, second with white hair on the basal half, and a large black spot on the middle, third with a black spot on the middle, and a white hairy spot on the posterior angle, fourth with a black spot.

Length nearly seven-twentieths of an inch.

Belongs to Wiedemann's third tribe.

ASILUS, *Lin. Meig.*

1. *A. vertebratus*. Tergum pale cinereous; segments blackish at base; tibia testaceous.

Inhabits Missouri.

Head yellow; *proboscis* and *antennæ* black; *thorax* yellowish-cinereous, the dusky line divided by a cinereous one; *wings* reddish-brown; *feet* black, with cinereous hair, *tibia* and *tarsi* above testaceous; *tergum* whitish-cinereous, with a large transverse blackish subtriangular spot at the base of each segment, terminal anal segments black; *venter* immaculate.

Length to the tip of the wings one inch and two-tenths.

This species belongs to the second tribe in Wiedemann's division of this genus.

2. *A. sericeus*. Sericeous, somewhat golden; thorax with a dilated brown vitta; colours of the tergum changeable.

Inhabits Pennsylvania.

Antennæ dull yellowish; *thorax*, vitta attaining the scutel, and in a particular light changing to bright yellow; *wings* ferruginous, areolæ of the thinner margin, and of the tip dusky; *feet* light chesnut, somewhat sericeous; *tergum* dark-brown, with bright yellow posterior margins to the segments when viewed from behind or above, bright yellow or golden, with brown posterior margins to the segments when viewed from before; *venter* blackish-brown, in a particular light ferruginous.

Length rather more than one and one-tenth inches.

This beautiful species is referable to Meigen's first tribe.

OMMATUS, *Wied.*

O. tibialis. Black-brown; abdomen black; tibia white.

Inhabits Pennsylvania.

Front and *hypostoma* golden-yellowish; *vibrissæ* gray, near the antennæ black; *occiput* silvery, nearly glabrous; *thorax* dark brown, approaching black, with an obsolete narrow brown line on the middle; *scutel*, *metathorax*, *pleuræ*, *pectus*, and *coxæ* silvery; *wings* pellucid, with black nervures; *thighs* dark chesnut; *tibia* white, intermediate and posterior ones near the tip, and *tarsi* brown.

Length eleven-twentieths of an inch.

DIOCTRIA, *Meig.*

1. *D. 8-punctata*. Subglabrous, black; abdomen with four white spots on each side.

Inhabits the United States.

Body black, nearly glabrous, polished; *front* yellowish; *thorax* with three yellow lines, of which the exterior ones are dilated before, and include a dusky spot; *feet* testaceous, *tibia* and tarsal joints tipped with blackish; *tergum* punctured, and with a white spot at the lateral tip of the second, third, fourth and fifth segments.

Length three-tenths of an inch.

This species is an inhabitant both of the western and eastern states. The first joint of the antennæ is

considerably longer than the second, though not double its length, and the terminal joint is elongated, subcylindrico-compressed, obtuse at tip, with a short spine on the superior surface rather beyond the middle, and a small oblong-ovate denudated space on the inner surface. The wing nervures are arranged as in *Dioctria* and *Dasypogon*.

GENUS. *DASYPOGON*, Meig.

1. *D. 6-fasciatus*. Cinereous abdomen black, with a white band on each segment.

Inhabits Missouri.

Body black, densely covered with short cinereous hair; *head* with longer silvery hair; *antennæ* black; *nervures* fuscous; *tergum* black, polished, each segment with a white band at tip, a little dilated in the middle, and occupying about one-third of its proper segment; *thighs* and *tibia* testaceous at base; *halteres* pale.

Length seven-twentieths of an inch.

2. *D. abdominalis*. Yellow; thorax cinereous; wings dusky.

Inhabits Pennsylvania.

Body cinereous; *head* with an impressed line between the antennæ; *antennæ* and *rostrum* black; *thorax* with an abbreviated brown line before and a lateral interrupted one; *wings* dark brown, immaculate; *abdomen* bright yellow, very slightly tinged with rufous, immaculate; *feet* pale rufous, *tibia*

dusky at tip, tip of the posterior ones dilated, and first joint of the posterior tarsi also dilated and as long as the three following segments united.

Length less than three-tenths of an inch.

The head is very wide, the eyes being proportionally very large, the vertex deeply concave, and the stemmata placed on a common elevation.

3. *D. trifasciatus*. Cinereous; tergum black, trifaciate with whitish.

Inhabits Pennsylvania and Maryland.

Antennæ black, first joint of the style longer than the second; *wings* dusky, hyaline, *nervures* as in Meigen's fig. 10, pl. 20, excepting that the central cellule is rather more elongated; *tergum* velvet-black, a cinereous band at base, a linear one near the middle, and a dilated silvery one on the middle, tip of the tergum cinereous; *venter* somewhat livid, immaculate.

Length ♂ two-fifths of an inch; ♀ half an inch.

Found sometimes in sandy districts. The ground colour of the body is black, but this colour is concealed by a pruinose covering.

4. *D. argenteus*. Cinereous, immaculate; poisers pale yellowish.

Inhabits Pennsylvania and Maryland.

Antennæ black, second joint as long, or slightly longer than the first, first joint of the style longer than the second, which is acicular and minute; *mys-tax*, and hair of the genæ, pure white; *vibrissæ*

none; *wings* hyaline, *nervures* light brown, arranged as in Meigen's fig. 11, pl. 20.

Length from three-tenths to seven-twentieths of an inch.

Like the preceding insect, the ground colour is black, but this colour is concealed by a universal pruinose covering, which has almost a silvery brightness when the animal is living and under the influence of the sun's rays.

5. *D. politus*. Tergum blackish-blue; posterior half of the wings fuscous.

Inhabits Pennsylvania and Maryland.

Hypostoma and *front* golden-brown; *mystax* and *vibrissæ* yellowish-brown; *vertex* brown; *genæ* pure white; *antennæ* black, first joint of the style longer than the second, which is acicular and minute; *thorax* golden-brown, a double black line abbreviated behind, and a lateral broad dusky line approaching behind near to the scutel; *feet* rufous, *thighs* black; *wings*, basal half hyaline, a hyaline spot on the carpus, and a smaller obsolete one near the apex, *nervures* arranged nearly as in Meigen's fig. 11, pl. 20; *tergum* fine blackish-blue, the segments with lateral marginal cinereous triangles.

Length nine-twentieths of an inch.

6. *D. cruciatus*. Thorax margined and spotted with yellow; abdomen black, annulate with yellow.

Inhabits Arkansa.

Hypostoma yellow; *stethidium* black; *thorax* broadly margined with yellow, a humeral triangular

spot and a spot each side of the middle connected by a line with the margin, yellow; *wings* ferruginous, *nervures* like those of the preceding species; *feet* ferruginous; *pleura* spotted with yellow; *abdomen* black, segments with a broad yellow posterior margin.

Length nine-tenths of an inch.

A large and fine species, very readily distinguished from others.

GENUS. LAPHRIA, *Fab. Latr.*

1. *L. fulvicauda*. Black, with cinereous hair; wings blackish; tergum fulvous at tip.

Inhabits Missouri.

Body black, with long cinereous hair; *head* large, transverse; *eyes* deep black; *thorax* varied with black and cinereous, and with short black hair, two distinct longitudinal dorsal black lines, a more distinct cinereous band in the middle, interrupted by the dorsal lines, and two cinereous obsolete points each side behind; *wings* blackish; *halteres* pale at tip; *abdomen* depressed, above and beneath subglabrous, hairy each side, two terminal segments of the tergum with a common fulvous spot.

Length about three-fifths of an inch.

I found an individual of this species at *Cote Sans Dessein*, on the Missouri River.

2. *L. glabrata*. Black, polished; posterior edges of the segments of the tergum white.

Inhabits the United States.

Body with very short prostrate indistinct hair, punctured; *hypostoma* silvery; *tubercle of the vertex* brown; *occiput* plumbeous; *collar*, and line upon the *thorax* each side before the wings cinereous; *pleura* and *pectus* with a cinereous reflexion; *wings* immaculate, *nervures* brown, nearly resembling in their arrangement Meigen's fig. 20, pl. 20; *poisers* whitish; *feet* reddish-brown, the middle of the *thighs*, tips of the *tibia* and *tarsi* darker, posterior feet beneath densely hairy; the basal and terminal segments of the *tergum* destitute of the white edge.

Length one-fourth of an inch.

Var. a. feet pale.

I have a specimen in which the external branch of the terminal furcate nervure is continued a short distance beyond its connexion, as in Meigen's fig. 23. The antennæ of this species are like those of *Dioctria 8-punctata*, excepting that they are acute at tip, and the arrangement of the nervures, decides the generic affinity of this insect.

[TO BE CONTINUED.]

Dissection of a Batracian Animal in a living state.

By Richard Harlan, M. D. Professor of Comparative Anatomy to the Philadelphia Museum. Read February 5, 1823.

The specimen was sent from Georgia to Dr. Mease of this city. An account of a similar animal has lately